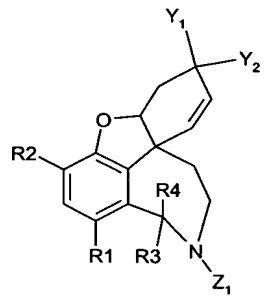
Patent claims:

1. Use of galanthamine and galanthamine derivatives exhibiting cholinergic activity for manufacturing medicaments for the treatment of post-operative delirium and/or subsyndromes of post-operative delirium.

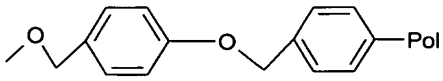
2. Use according to claim 1 for manufacturing medicaments for the preventive treatment of post-operative delirium and/or subsyndromes of post-operative delirium.

3. Use according to claims 1 or 2, characterized by the fact that the galanthamine derivatives have the general formula

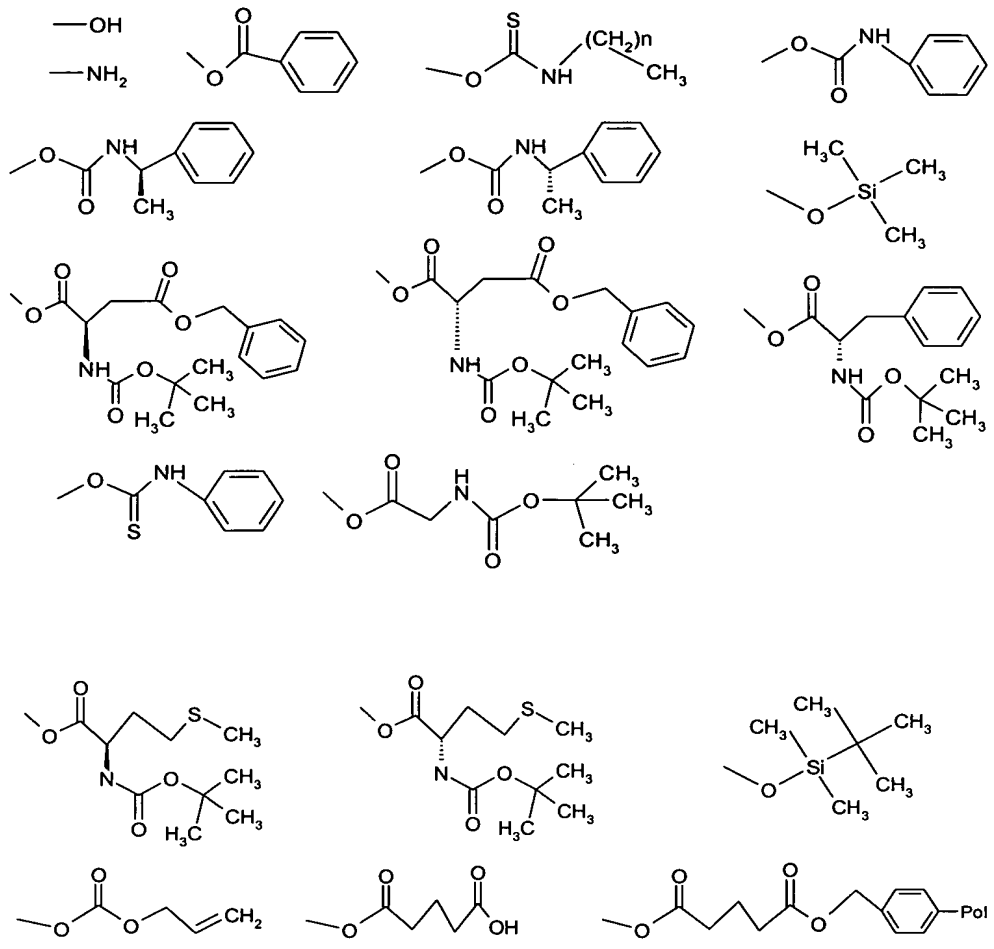


Ia

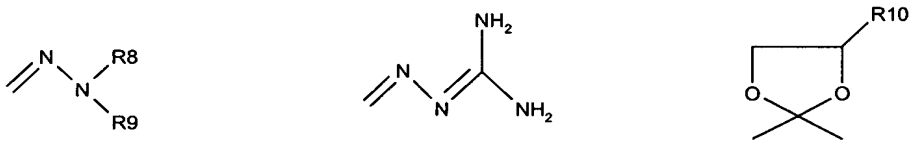
and the salts thereof, wherein R_1 is H, branched or straight chain (C_1-C_6) alkyl, Br, NO_2, NR_5R_6 wherein R_5 and R_6 are the same or different and are selected from H, branched or straight chain (C_1-C_6) alkyl, and wherein R_2 is OH, branched or straight chain (C_1-C_6) alkyl, methoxy, phenyloxy or the following group



whereby Pol is a polymer, preferably one in accordance with WO-A1-01/174820, and wherein R_3 and R_4 either at the same time or alternatively are H, D, CN, straight chain or branched (C_1-C_6) alkyl or a carbonyl group together, wherein Y_1 and Y_2 alternatively are H or a group selected from:

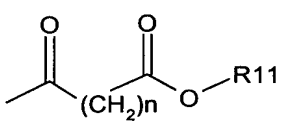


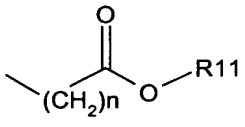
wherein n represents a value of 0, 1 to 15, and Pol has the meaning indicated above, and wherein Y_1 and Y_2 further represent together a carbonyl group (=O), =NH, = N-OR_7, wherein R_7 is H, tosylate or branched or straight chain (C_1-C_6) alkyl, or Y_1 and Y_2 together is a group selected from:

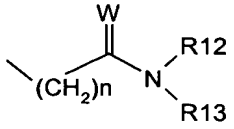


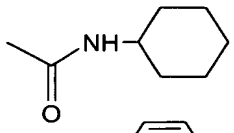
wherein R_8 and R_9 are the same or different and are H, branched or straight chain (C_1-C_6) alkyl, -$(CH_2)_2$-OH, CHO, $CONH_2$, tBOC (tert-Butoxycarbonyl), or mean -COCOOH, R_{10} is H or CH3, and wherein when Y_1 is -O-$(CH_2)_2$-OH, Y_2 is OH, and wherein Z_1 is H, branched or

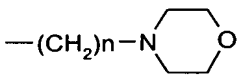
straight chain (C_1-C_6) alkyl, (C_2-C_7) alkenyl, (C_2-C_7) alkynyl, trifluoroacetyl, formyl, phenyl or a group selected from:

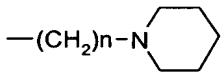


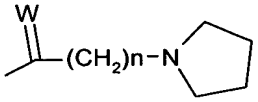


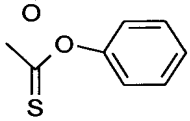


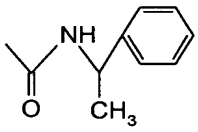


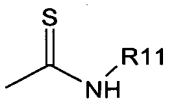


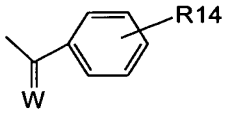


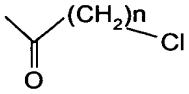


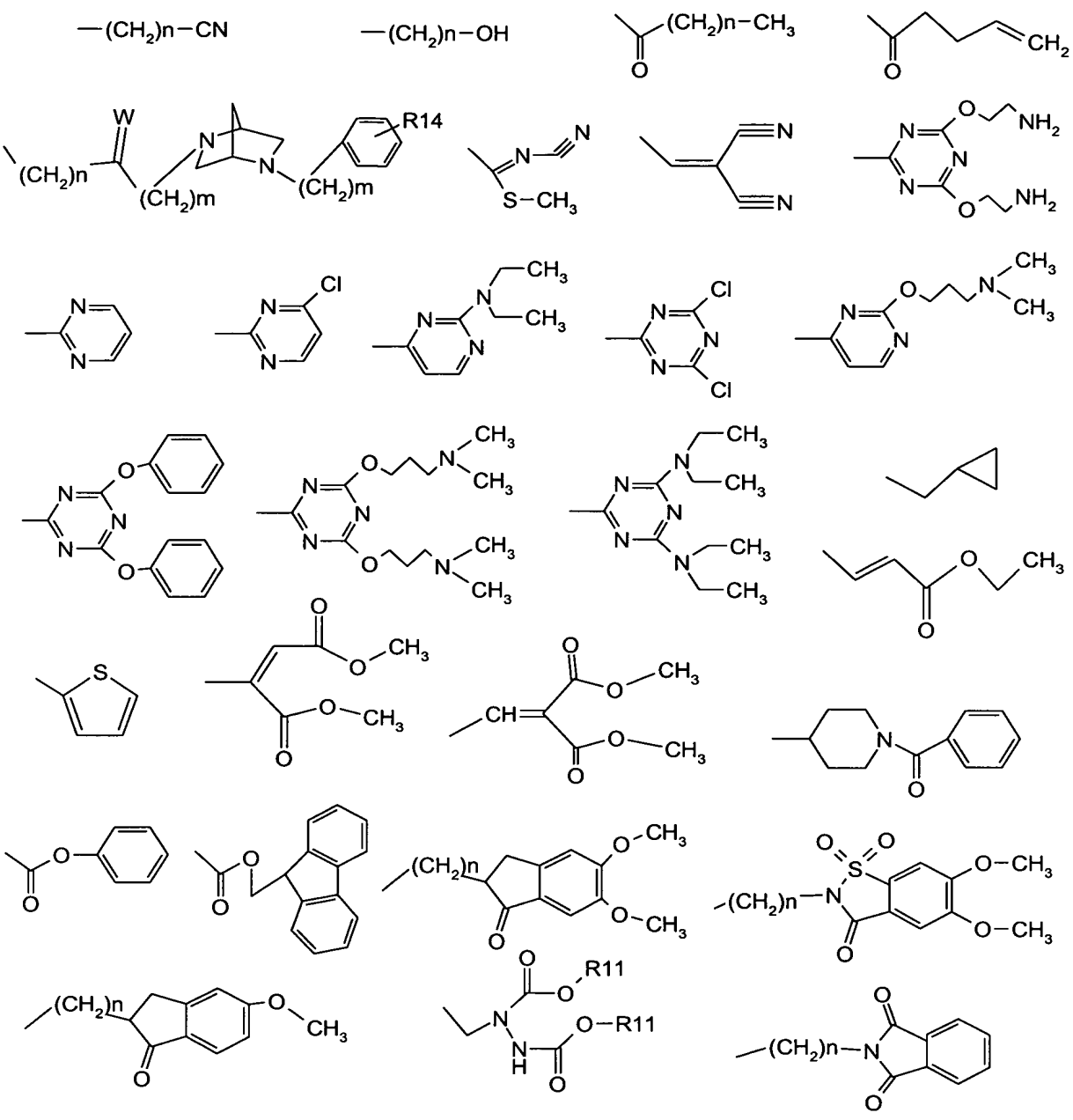


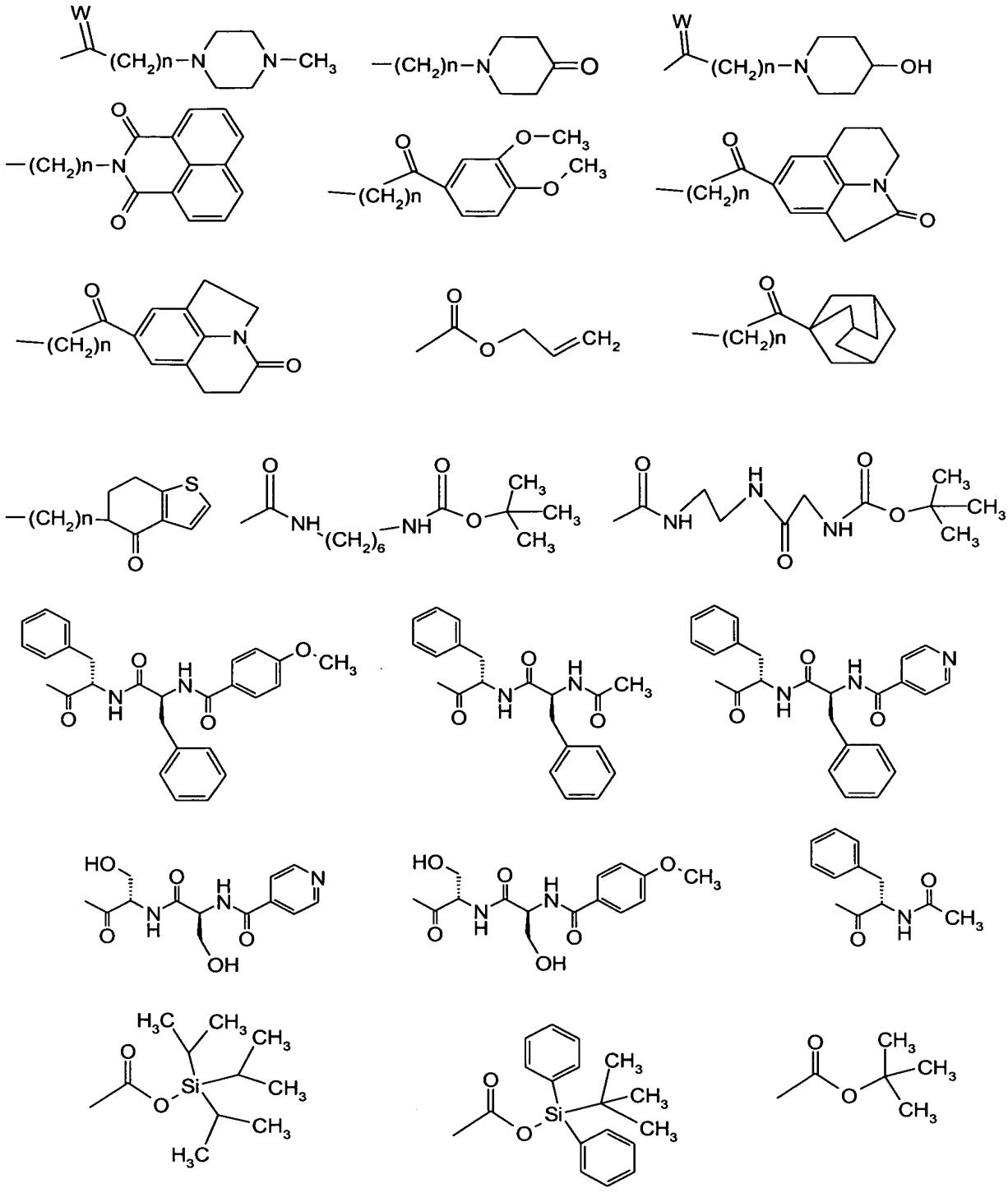






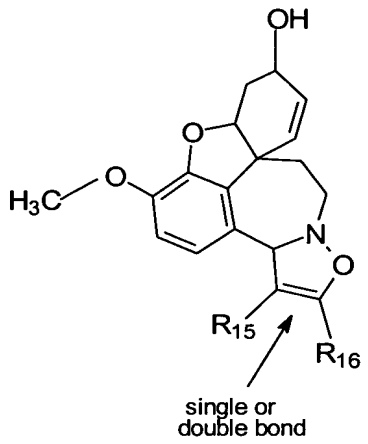






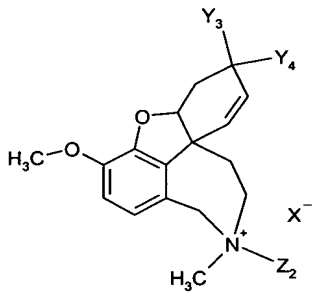
wherein R_{11} is H, straight chain (C_1-C_6) alkyl, branched (C_1-C_6) alkyl or (C_2-C_7) alkenyl, R_{12} and R_{13} are the same or different and are selected from H, straight chain or branched (C_1-C_6) alkyl,

phenyl, chlorophenyl, (trifluoromethyl)-phenyl or 1-naphtyl, wherein R_{14} is H, F, CH_3, NO_2, Cl, Br, J, CF_3, n has the meaning indicated above, m is 0 or 1, and W has the meaning H or O, and wherein further Z_1 and R_3 form a common ring



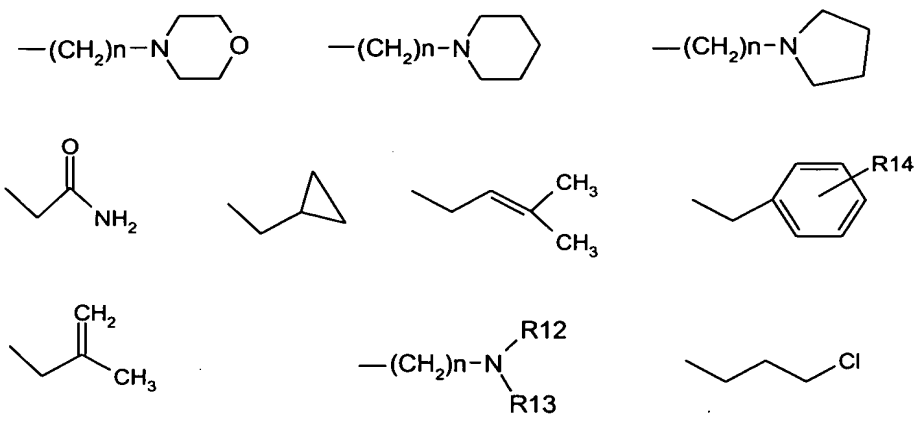
wherein R_{15} and R_{16} alternatively mean H, $COOCH_3$, $COOCH_2CH_3$, CN, $COCH_3$.

4. Use according to claims 1 or 2, characterized by the fact that the used Galanthamine derivatives have the general formula Ib



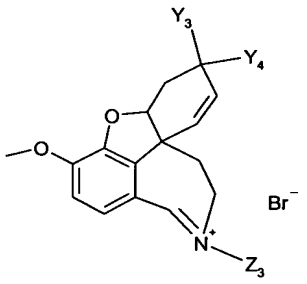
Ib

wherein Y_3 and Y_4 alternatively mean H and OH, X is Cl, Br or I, Z_2 is oxygen (N-oxide and no counterion), branched or straight chain (C_1-C_6) alkyl, or (C_2-C_7) alkenyl or (C_2-C_7) alkynyl or a group selected from:



wherein n, R_{12}, R_{13} and R_{14} have the meanings as defined in accordance with claim 3.

5. Use according to claims 1 or 2, characterized by the fact that the used galanthamine derivatives have the general formula Ic

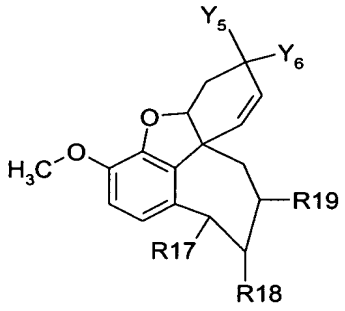


Ic

wherein Y_3 and Y_4 the meaning defined in accordance with claims 3 or 4 have, and Z_3 is oxygen (N-oxide and no counterion) or is a methyl.

6. Use according to claims 1 or 2, characterized by the fact

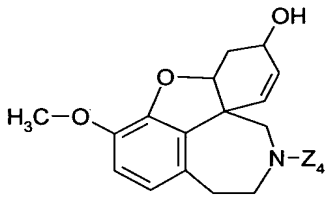
that the used galanthamine derivatives have the general formula Id



Id

and their salts, wherein Y_5 and Y_6 alternatively are H or OH, or together form a keto group, and R_{17}, R_{18}, R_{19} are alternatively for two substituents H, wherein the third substituent is NH_2 or $CONH_2$.

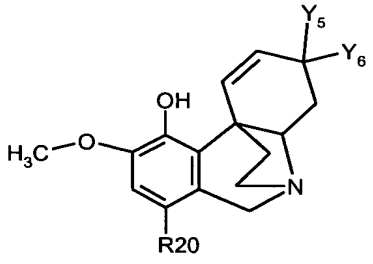
7. Use according to claim 1 or 2, characterized by the fact that the used galanthamine derivatives have the general formula Ie



Ie

or their salts, wherein Z_4 is straight chain or branched (C_1-C_6) alkyl or 4-brombenzyl.

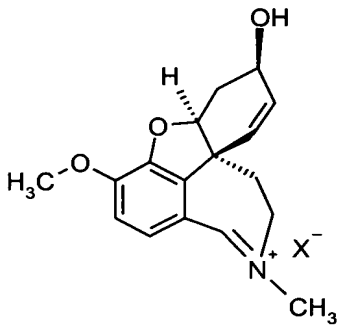
8. Use according to claims 1 or 2, characterized by the fact that the used galanthamine derivatives have the general formula If:



If

or their salts, wherein Y_5 and Y_6 have the meanings as defined in claims 3 to 7, and R_{20} is H or Br.

9. Use according to claims 1 or 2, characterized by the fact that the used galanthamine derivative has the following structural formula



and its pharmaceutical acceptable salts, hydrate or a solvate thereof and having the chemical name (4aS, 6R, 8aS)-6-Hydroxy-3-methoxy-11-methyl-4a,5,9,10-tetrahydro-6H-benzofuro[3a,3,2-f][2]benzazepinium.

10. Use according to claim 9, characterized by the fact that the pharmaceutical acceptable salt counterion of (4aS, 6R, 8aS)-6-Hydroxy-3-methoxy-11-methyl-4a,5,9,10-tetrahydro-6H-benzofuro[3a,3,2-ef][2]benzazepinium is selected from the group of halides, preferably bromide, carboxylic acids with 1-3 carboxyl functions, particularly preferably tartrate, malonate, fumarate and succinate, and sulfonic acids, preferably methane sulfonic acid.